

WHAT IS CLAIMED IS:

1           1.     A valve device for a silencer, which opens a bypass  
2     passage provided in the silencer to flow exhaust gas through the  
3     bypass passage when exhaust gas pressure rises to a certain pressure,  
4     the valve device comprising:

5           a base having a valve opening through which exhaust gas flows;  
6     and

7           a plate-like valve for opening and closing the valve opening,  
8     the plate-like valve being fixed to the base at its proximal portion,  
9     wherein the plate-like valve is bent at both side edges thereof  
10    in a certain range extending from its distal end toward the proximal  
11    portion.

1           2.     A valve device for a silencer according to claim 1,  
2     further comprising a plate spring member, a distal end of which  
3     abuts on a surface of the plate-like valve to urge the plate-like  
4     valve toward a valve close position, wherein the plate spring member  
5     is obliquely arranged relative to the plate-like valve such that  
6     an abutting position of the plate spring member against the  
7     plate-like valve shifts toward the proximal portion of the  
8     plate-like valve with an increase in a deflection amount of the  
9     plate-like valve, and wherein the plate spring member abuts on  
10    a reinforced area of the plate-like valve that is reinforced by  
11    bending the side edges of the plate-like valve.

1           3.     A valve device for a silencer according to claim 2,  
2     wherein the plate spring member is bent to form a curved surface.

1           4.     A valve device for a silencer according to claim 2,  
2     further comprising a stopper member, wherein the plate-like valve  
3     is sandwiched between the base and a proximal portion of the stopper  
4     member and fixed thereto, and wherein the plate spring member is  
5     fixed to a distal portion of the stopper member.

1           5.     A valve device for a silencer according to claim 4,  
2     wherein the stopper member, the plate-like valve, and the base  
3     are fixed by welding.

1           6.     A valve device for a silencer according to claim 4,  
2     wherein the plate spring member is fixed to the stopper member  
3     by welding.